

QUARTZ SYNTHESIZER AM/FM STEREO TUNER

# KT-59

## INSTRUCTION MANUAL

KENWOOD CORPORATION

# Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components, that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features, and system-connection considerations, so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability, we have sought to anticipate your needs and desires.

## Keep this manual handy for future reference.

### For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model \_\_\_\_\_ Serial Number \_\_\_\_\_

### Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

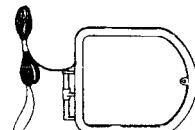
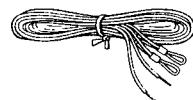
### For the U.S.A.

#### Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

### Accessories

- AM loop antenna ..... 1  
(The shape of the loop antenna provided may differ depending on the area.)
- FM indoor antenna ... 1



- AC plug adaptor ..... 1  
(Except for some areas)  
For the unit with a European AC plug in areas other than Europe.
- AM loop antenna holder ..... 1



- Audio cord ..... 1



## Contents

**Caution: Read the pages marked △ carefully to ensure safe operation.**

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**⚠ Caution: Read this page carefully to ensure safe operation.**

## Before applying power

### For the U.S.A. and Canada

#### Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

#### Safety precaution for a Polarized AC plug

However, some products may be supplied with a non-polarized plug.

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

### For the United Kingdom

#### Important!

Units shipped to the U.K. are designed for operation on 240 volts AC only.

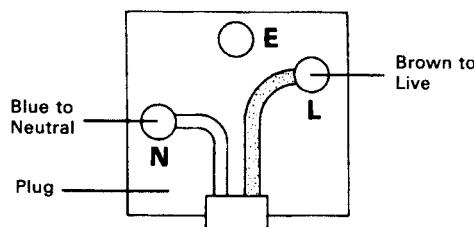
The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue ..... Neutral  
Brown ..... Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

**Wire colour**                            **Plug terminal marking**  
Blue ..... N or Black  
Brown ..... L or Red



**Notes:**

1. If a 13-amp plug is used, this must be fitted with a 5-amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

### For Australia and Europe

#### Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 220 V AC only.

### For other countries

#### Important!

Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

#### AC voltage selection

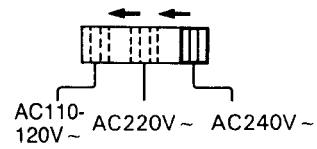
This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch Type A or Type B on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

**Note:**

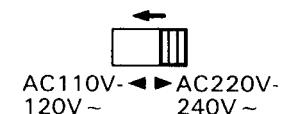
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

#### AC voltage selector switch

**Type A**



**Type B**



Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

## Safety precautions

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

# IMPORTANT SAFEGUARDS

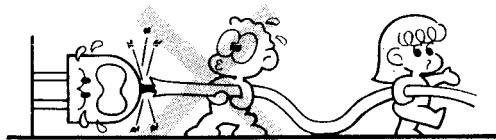
**Caution : Read this page carefully to ensure safe operation.**

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

**1. Power sources** — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**2. Power-cord protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Never pull or stretch the cord.

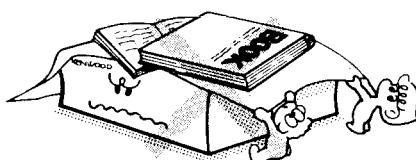


**3. Grounding or polarization** — The precautions should be taken so that the grounding or polarization means of this unit is not defeated.

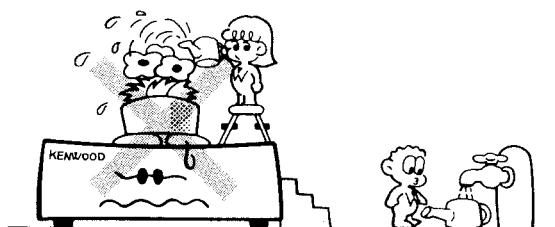
**4. Ventilation** — The unit should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.

Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.

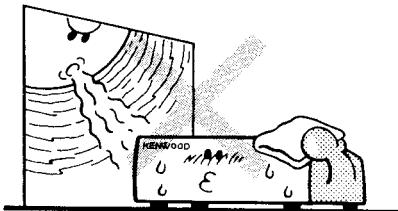


**5. Water and moisture** — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

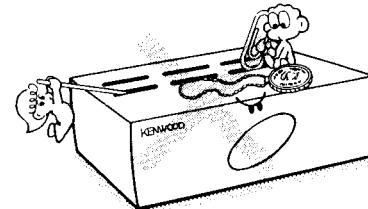


**6. Temperature** — The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

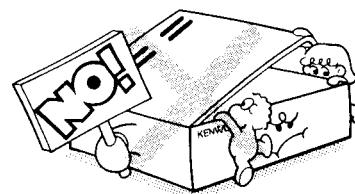
**7. Heat** — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



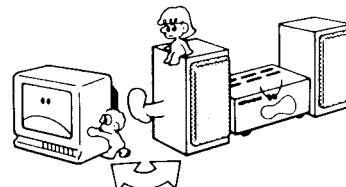
**8. Electric shock** — Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



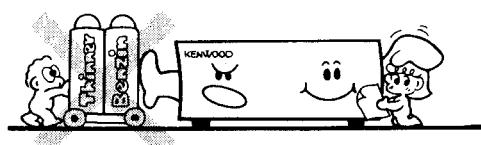
**9. Enclosure removal** — Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



**10. Magnetic fields** — Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



**11. Cleaning** — Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.



**⚠ Caution: Read this page carefully to ensure safe operation.**

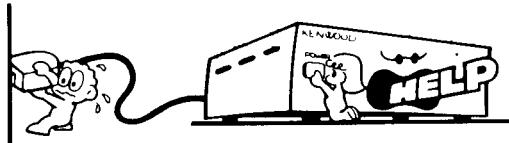
**12. Carts and stands** — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



**13. Nonuse periods** — The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

**14. Abnormal smell** — If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

## POWER OFF!



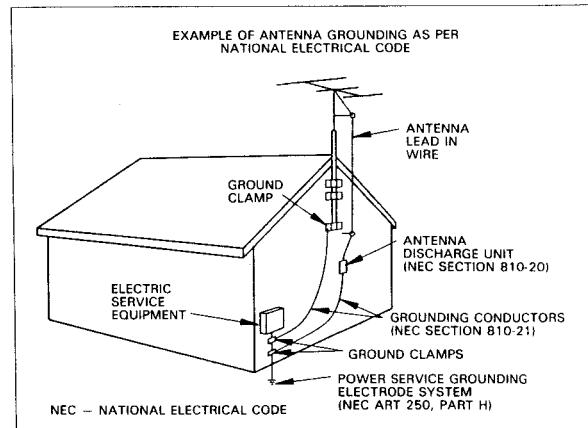
**15. Damage requiring service** — The unit should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the unit; or
- C. The unit has been exposed to rain; or
- D. The unit does not appear to operate normally or exhibits a marked change in performance; or
- E. The unit has been dropped, or the enclosure damaged.

**16. Servicing** — The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

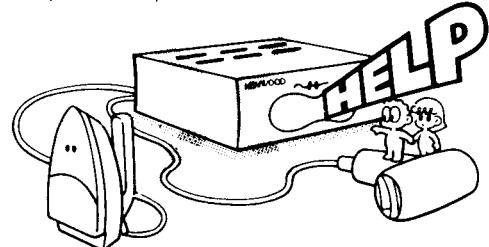
**17. Outdoor antenna grounding** — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/ NFPA No. 70—1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding con-

ductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



**18. Power lines** — An outdoor antenna should be located away from power lines.

**19. AC outlets** — Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



The maximum capacities indicated for the AC outlets on the rear panel of this unit are as follows.

UNSWITCHED outlet: 800 W (for the U.S.A. and Canada)  
400 W (for Australia)  
500 W (for other countries)

**Notes:**

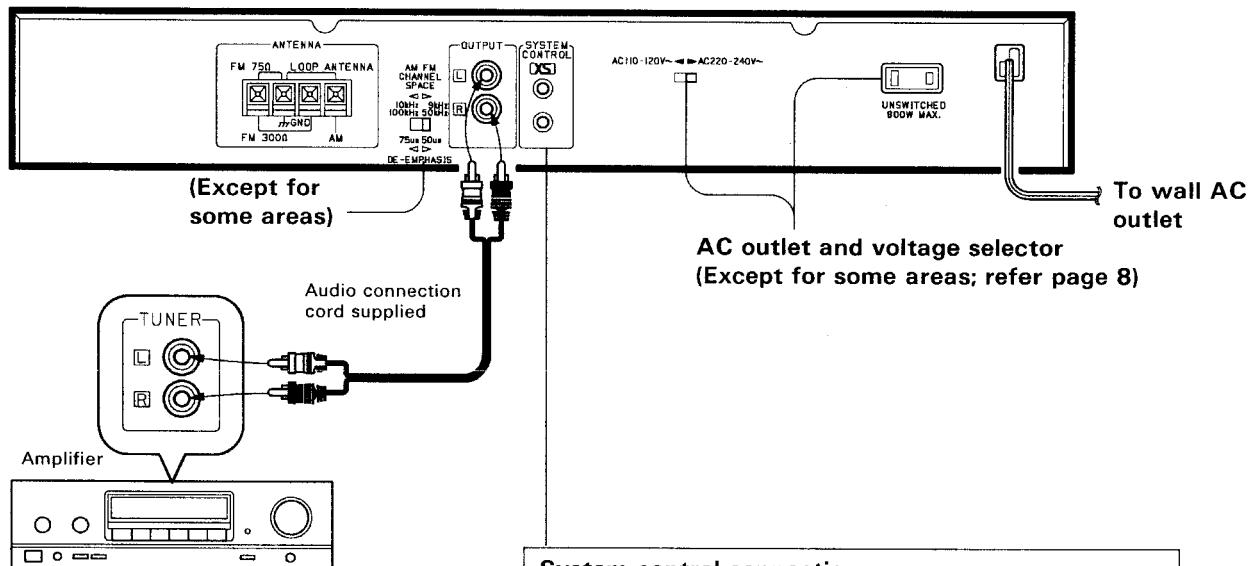
1. Item 3 is not required except for grounded or polarized equipment.
2. Item 17 and 18 are not required except for units provided with antenna terminals.
3. Item 17 complies with UL in the U.S.A.

# System connections

## Basic system connections

Make connections as shown below. When connecting the related system components, refer also to the instruction manuals of the related components.

Do not plug in the power lead until all connections are completed.



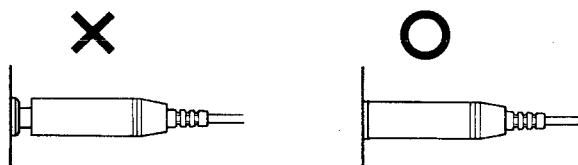
AC outlet and voltage selector  
(Except for some areas; refer page 8)

### System control connection

When connected to an amplifier or receiver having KENWOOD SYSTEM CONTROL terminals, system operation such as remote control is made possible. For details, refer to the instruction manual of the amplifier.

If your amplifier is not equipped with the SYSTEM CONTROL terminals, do not connect anything to any SYSTEM CONTROL terminal.

Do not connect the unit in any system configuration other than specified.

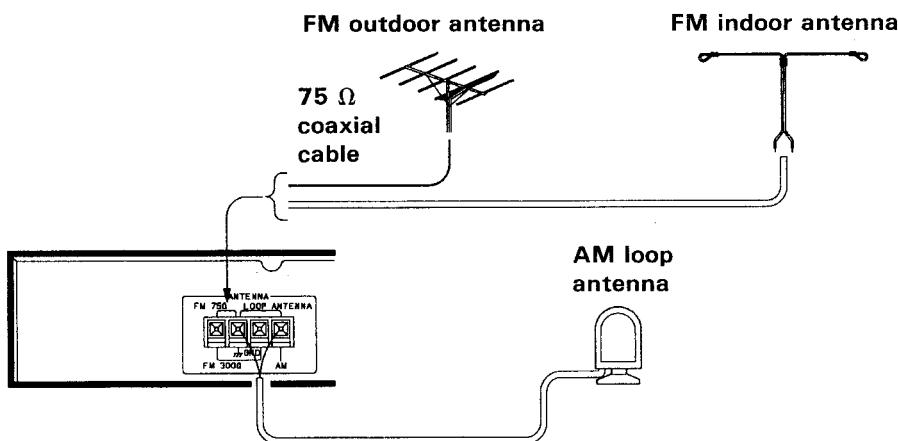


- Be sure to insert the System Control cord plugs fully into the SYSTEM CONTROL terminals.
- If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.

### Notes:

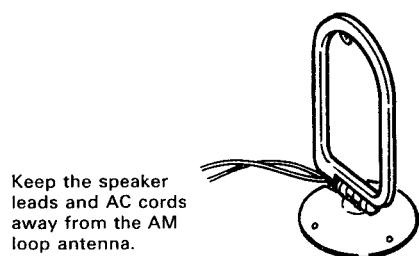
1. Connect all cords firmly. If connections are loose there could be loss of sound or noise produced.
2. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.
3. When plugging and unplugging connection cords after all connections are completed, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.

## Antenna connections



### ■ AM loop antenna

Install the AM loop antenna on the supplied loop antenna holder and place it on a shelf, etc., or install it on the rack or wall with screws. Rotate the AM loop antenna to the right or left for best reception.

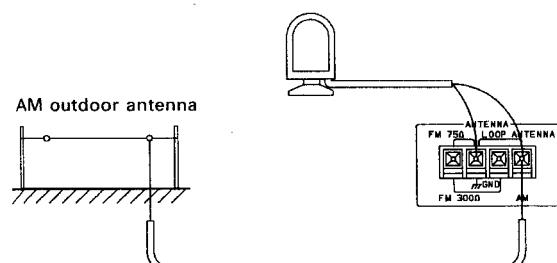


**Note:**

**Do not place the AM loop antenna on the unit. As this unit employs a computing device, placing the AM loop antenna on the unit may result in noise generation. Place the AM loop antenna away from the unit.**

### ■ AM outdoor antenna

In steel buildings or at a great distance from the transmitter, it may be necessary to install an outside longwire antenna. The end of this wire should be stripped of insulation and connected to the AM terminal. At this time, keep the loop antenna connected.



### ■ FM outdoor antenna

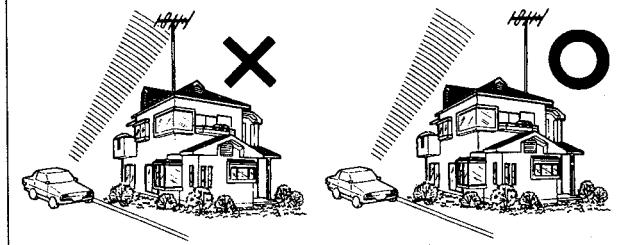
It is recommended to install an exclusive FM outdoor antenna to capture FM broadcasts with high sound quality. Use a coaxial cable for the connection between the outdoor antenna and FM ANTENNA terminal on the rear panel. For the connection between the coaxial cable and FM ANTENNA terminal, please refer to the illustration above.

### ■ FM indoor antenna

In areas where FM waves are strong, FM broadcasts can be received by connecting the supplied T-shaped antenna as shown in the illustration above. However, as FM waves are susceptible to external radio interference causing distortion, it is recommended to use an exclusive FM outdoor antenna.

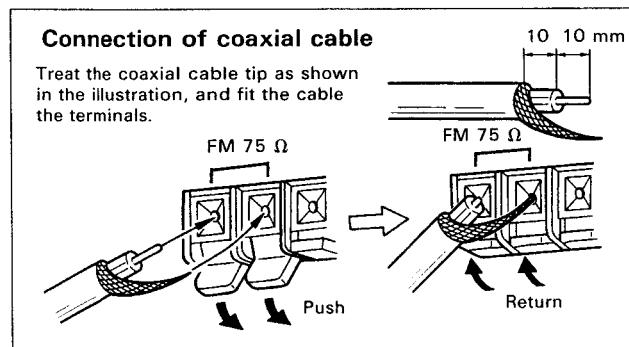
- To minimize auto-ignition noise, locate the antenna as far from heavy traffic as possible.
- Keep the feeder or coaxial cable as short as possible. Do not bundle or roll up excess cable.
- The antenna should be at least two meters (6.6 feet) from reinforced concrete walls, or metal structures.

#### FM outdoor antenna setting

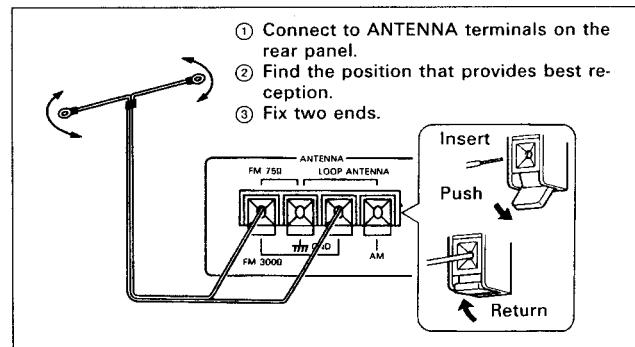


## Antenna cable connection

### ■ Coaxial cable connection



### ■ Indoor antenna connection



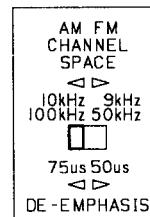
### ■ FM DE-EMPHASIS/CHANNEL SPACE switch (Except for some areas)

The FM DE-EMPHASIS/CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS/CHANNEL SPACE setting is not matched to the area where the unit is to be used; for instance, when you moved from area 1 to area 2 or vice versa, desired reception of AM/FM broadcasts is not expected. In this case, change the FM DE-EMPHASIS/CHANNEL SPACE setting in accordance with the area corresponding to the table.

The FM DE-EMPHASIS is switched over at the same time.

**Note:**

When changing the setting of the FM DE-EMPHASIS/CHANNEL SPACE switch, first disconnect the power cord, then reset the channel space switch, connect the power cord again, and turn the power on.



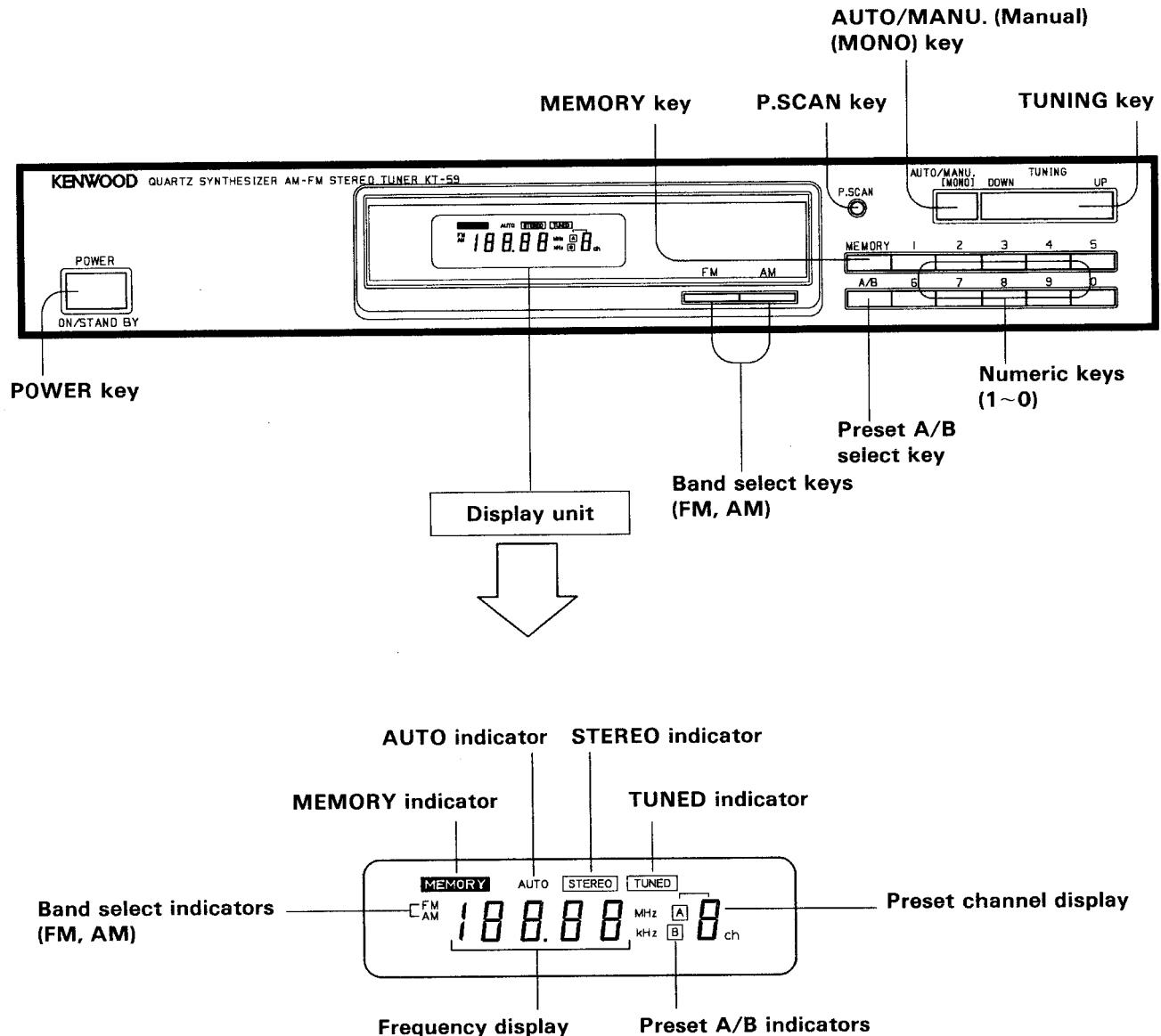
### FM DE-EMPHASIS/CHANNEL SPACE table

Area	Channel Space Freq.	FM DE-EMPHASIS
1. U.S.A., Canada, and South American countries	FM: 100 kHz AM: 10 kHz	75 $\mu$ s
2. Other countries	FM: 50 kHz AM: 9 kHz	50 $\mu$ s

### ■ AC outlet and voltage selector on the rear panel

Unit destination	Shape of the AC outlet	AC voltage selector
For U.S.A. and Canada		Not equipped
For U.S. military		110 - 120V/220 - 240V
For Australia		Not equipped
For other countries		110 - 120V/220 - 240V

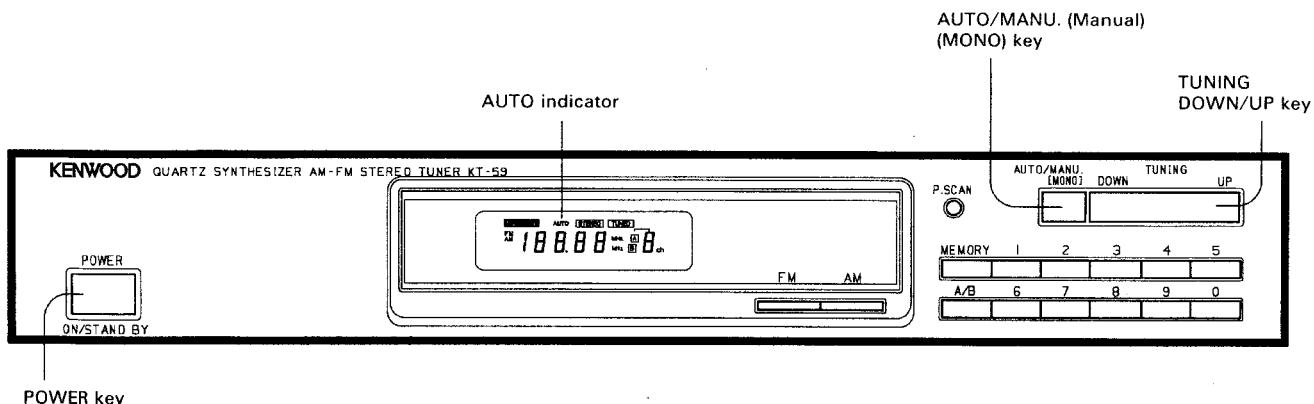
# Controls and indicators



## POWER key standby

A small amount of current is used to support the memory when POWER is switched OFF. This is known as standby mode.

# Operating instructions



## ■ Listening to broadcasts

1. Press the POWER key ON.
2. Select the desired broadcast band with the band keys: FM, AM

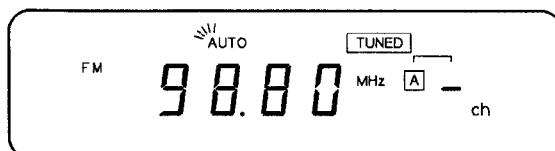
3. Referring to "Station tuning", tune to the desired broadcasting station.
  - MUTING is operated during station select, so there is no sound. When a station has been tuned in the sound is resumed, so take care over the volume level.
4. When you have tuned in the station you want, adjust to the volume with the amplifier's VOLUME control.

## ■ Station tuning

### AUTO tuning

By pressing the TUNING key, a broadcasting station will be searched and tuned in automatically. In the FM band, stereo or monaural reception mode will be selected automatically according to the broadcast signal.

1. Press the AUTO/MANU. (MONO) key so that the AUTO indicator lights up.

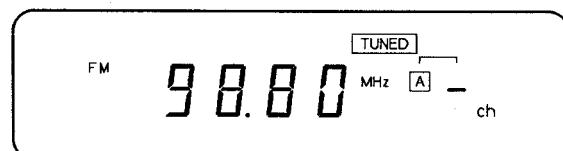


2. Press the TUNING key to tune to a broadcasting station.
  - When the UP key is pressed, the frequency display changes towards the higher frequencies. Press the DOWN key to search and capture in the reverse direction.
  - When a station is tuned in, the frequency display stops, and is indicated in the display.
3. Repeat the above procedure until the desired station is received.

### MANUAL tuning

A broadcasting station which has weak signal strength may not be able to be located with auto tuning operation. In such a case, use the manual tuning method to receive a monaural broadcast.

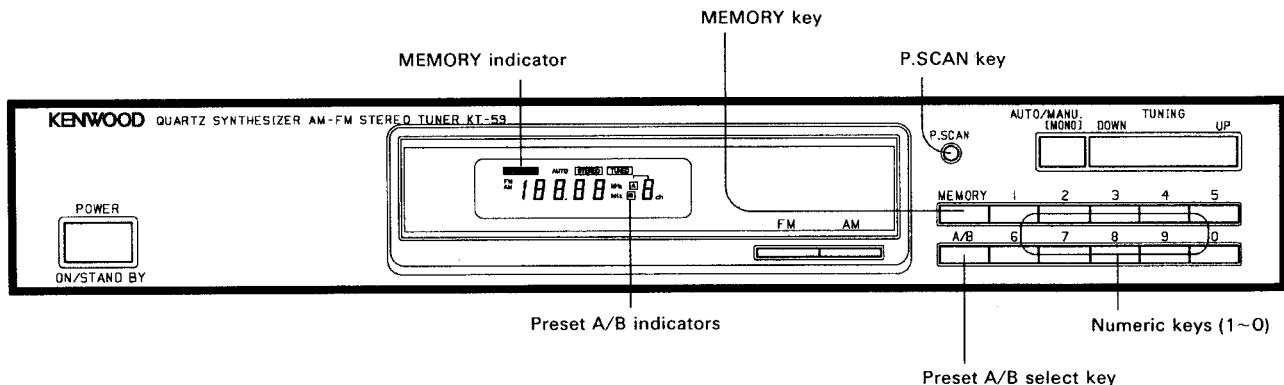
1. Press the AUTO/MANU. (MONO) key so that the AUTO indicator light goes out.



2. Press the TUNING key to tune to the desired broadcasting station.
  - The display frequency changes one step at a time each time the TUNING keys are pressed.
3. Release the TUNING key as soon as you reach the frequency of the station you want.
  - If you are not perfectly tuned in to the station there will be noise. Make fine tuning adjustment with UP/DOWN.

## Presetting FM, AM broadcasting stations

This unit enables presetting of the broadcast station frequencies which are displayed when preset station select is called.



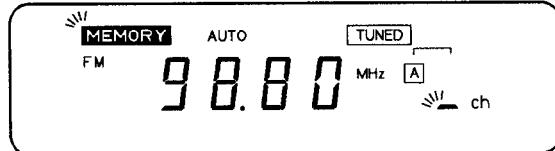
### ■ How to preset

Using numeric keys for both channel groups A and B, up to 20 stations can be preset.

#### 1. Referring to "Station tuning", tune to the desired station to be preset.

#### 2. Press the MEMORY key.

- The MEMORY indicator lights.



#### 3. Select the channel group A or B with the A/B select key.

- When the A/B select key is pressed, the A or B indicator appears in the display.

#### 4. Press the numeric keys (1~0) for the preset you want within 5 seconds of pressing the MEMORY key.

- When the preset operation has been completed, the MEMORY indicator will go out and the preset number will be displayed.
- If the input is erroneously made or if more than 5 seconds elapse after pressing the MEMORY key, perform the procedures from the beginning.
- If you press a numeric key for a previously input preset, contents change to the new preset.

#### 5. In the same manner, up to 20 stations can be preset in channel group A and B.

### Last channel memory

Whenever the POWER key is turned ON or the receiving band is switched between FM and AM, or when the input selector of the amplifier is switched to the tuner from another source, the broadcasting station which was last received will be automatically tuned in for both FM and AM.

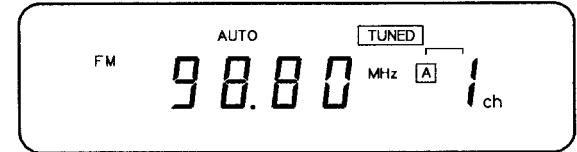
### ■ How to tune in a preset station

When stations are preset by input of numeric keys, the station you want can be tuned in with just a one-touch operation.

#### 1. Select the channel group A or B with the A/B select key.

#### 2. Press the numeric key for the preset station you want.

- The frequency of the station you selected is shown on the display, and the station is received.



### ■ Preset scanning

The stations which are preset in the numeric keys can be received in sequence.

#### 1. Press the P.SCAN key.

- Preset stations will be received sequentially in 5 second intervals in the following order. When a frequency is not stored under a key, the next frequency in the sequence is received.

→ A-1 → A-2 ..... A-9 → A-0 → B-1 → B-2 ..... B-9 → B-0 →

#### 2. To stop preset scanning, press the numeric keys (1 ~ 0).

## In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Symptom	Cause	Remedy
No power when POWER is switched ON.	• Power cord is disconnected.	• Plug the AC cord into the AC outlet correctly.
Noise	• Noise due to car ignition system in vicinity. • Influence of electrical appliances. • TV is too close.	• Set the antenna away from the street. • Cut the power to the appliances. • Place the TV further away.
Distorted sound	• The provided AM loop antenna is installed in an incorrect direction or in the wrong place. • Noise is introduced from other electrical equipment. (such as fluorescent lights or an appliance using a motor) • Signal strength from the broadcasting station is too weak.	• Set the antenna as far from the tuner as possible while changing the direction to an optimum position. • Stop using the equipment generating noise, or keep it away from the tuner. • Install the AM outdoor antenna and connect it to the tuner.
FM/AM reception is impossible.	• Antenna is not connected. • Tuning band is not set correctly. • The required station is not tuned in.	• Connect the antenna to the tuner correctly. • Set the tuning band correctly. • Tune to the required station using the TUNING key.
Reception is impossible when a numeric key (1~0) is pressed after presetting.	• Frequency of the receivable station is not preset into the numeric key (1~0).  • The stored contents have been erased due to longterm power interruption.	• Tune to the frequency of a station which can be received, and preset into any of the numeric keys (1~0).  • Perform presetting operation again.

Notes:

1. As this system uses microcomputers, it is open to interference from external noise, and may sometimes not function properly. In such a case, unplug the power cord once, and then plug it in again.
2. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

# Specifications

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## FM tuner section

Tuning frequency range ..... 87.5 MHz – 108 MHz

Usable sensitivity (MONO) ..... 0.95  $\mu$ V/10.8 dBf

Total harmonic distortion (at 1 kHz 65 dBf input)

MONO ..... 0.4 %

STEREO ..... 0.5 %

Signal to noise ratio (at 1 kHz, 65 dBf input)

MONO ..... 78 dB

STEREO ..... 73 dB

Stereo separation

1 kHz ..... 40 dB

Alternate channel selectivity ( $\pm 400$  kHz) ..... 50 dB

Frequency response

(30 Hz – 15 kHz) ..... +0.5 dB, -2 dB

Output level/Impedance

(at 1 kHz, 75 kHz dev.) ..... 0.6 V/3.3 k $\Omega$

## AM tuner section

Tuning frequency range

9 kHz step ..... 531 kHz – 1,602 kHz

10 kHz step ..... 530 kHz – 1,610 kHz

Usable sensitivity ..... 11  $\mu$ V/(280  $\mu$ V/m)

Signal to noise ratio

(at 30% mod. 1mV input) ..... 50 dB

Total harmonic distortion ..... 0.5 %

Output level/Impedance

(at 30% mod. 1mV input) ..... 0.18 V/3.3 k $\Omega$

## General

Power consumption ..... 8 W

Dimensions ..... W: 440 mm (17-5/16")

H: 74 mm (2-15/16")

D: 267 mm (10-1/2")

Weight (Net) ..... 2.5 kg (5.5 lb)

Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.